

## WEST Search History

DATE: Wednesday, May 07, 2003

**Set Name** **Query**  
side by side

**Hit Count** **Set Name**  
result set

*DB=USPT,JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ*

L5	L2 and seed and raffinose and stachyose	6	L5
L4	L2 and seed (3a) (raffinose and stachyose)	0	L4
L3	L2 and seed (3a) (phytic (w) acid)	0	L3
L2	L1 and (mutant or genetic (a) defect)	8	L2
L1	soybean and myo-inositol near3 synthase	14	L1

END OF SEARCH HISTORY

L4 ANSWER 10 OF 10 WPIDS (C) 2003 THOMSON DERWENT  
AB US 5710365 A UPAB: 20010116

Hybrid or **mutant soybean** plant homozygous for at least  
1 gene that confers a **heritable phenotype** of a seed  
stachyose content of < 35 mu mol/g is new.

The soybean plant is not a member of the line LR28.

Also claimed are seeds of the soybean plant.

USE - The plant can be used in a process for making a soy protein  
product that is low in stachyose, comprising processing seeds from a  
soybean plant as above, the processing including:

(a) cracking the seeds to remove the meats from the hulls;

(b) flaking the meats obtained in step (a) to obtain a desired flake  
thickness;

(c) heat denaturing the flakes obtained in step (b) to obtain a  
desired Nitrogen Solubility Index, and

(d) grinding the denatured flakes of step (c) to obtain a desired  
particle size.

The process results in a full fat soy protein product.

The full fat flakes obtained in step (b) can be contacted with a  
solvent to extract oil from the flakes to a desired content level  
resulting in defatted flakes (all claimed).

Dwg.0/2

=> d his

(FILE 'HOME' ENTERED AT 13:41:28 ON 07 MAY 2003)

FILE 'CAPLUS, BIOSIS, MEDLINE, AGRICOLA, CAOLD, CASREACT, CROPU, DGENE,  
DPCI, ENCOMPAT2, EUROPATFULL, FSTA, IFIPAT, INPADOC, JAPIO, NTIS,  
PAPERCHEM2, PATDD, PATDPA, PATDPAFULL, PATOSDE, PATOSEP, PATOSWO,  
PCTFULL, PCTGEN, PIRA, RAPRA, SYNTHLINE, TULSA, ...' ENTERED AT 13:41:52  
ON 07 MAY 2003

L1 1165 S SOYBEAN (3A) MUTANT  
L2 4871 S (HERITABLE OR INHERITABLE) (2A) (PHENOTY? OR TRAIT? OR CHARAC  
L3 19 S L1 AND L2  
L4 10 S L3 NOT PY>1998

L6 ANSWER 1 OF 5 IFIPAT COPYRIGHT 2003 IFI

AB There is provided soybean protein products of significantly lower stachyose content as a function of an improved soybean having a seed stachyose content of less than 50  $\mu\text{mol/g}$ . Improved soybean lines are provided as are methods of using such reduced stachyose soybeans.

L6 ANSWER 2 OF 5 PCTFULL COPYRIGHT 2003 Univentio

ABEN The instant invention pertains to the identity, characterization and manipulation of a soybean enzyme that results in the alteration of raffinose saccharide, sucrose, phytic acid and inorganic phosphate content of soybean seeds, thus leading to valuable and useful soybean products. The instant invention comprises soybean lines with decreased capacity for the synthesis of myo-inositol 1-phosphate in the tissue of developing seeds in comparison to seeds of other soybean lines. As taught herein, reduction of myo-inositol 1-phosphate synthase enzymatic activity by any of several means will result in soybean seeds displaying the instant phenotype.

ABFR L'invention concerne l'identite, la caracterisation et la manipulation d'une enzyme de soja qui altere la teneur en saccharide de raffinose, en saccharose, en acide phytique et la teneur en phosphates inorganiques des amandes de soja, fournissant ainsi des produits du soja interessants et utiles. L'invention concerne egalement des lignees de soja presentant une capacite reduite a synthetiser le myo-inositol 1-phosphate dans le tissu des amandes en developpement, par rapport a d'autres lignees de soja. La reduction de l'activite enzymatique de la myo-inositol 1-phosphate synthase, engendree par l'un quelconque des differents moyens etudies donne des amandes de soja ayant le phenotype considere.

L6 ANSWER 3 OF 5 PCTFULL COPYRIGHT 2003 Univentio

ABEN This invention relates to a novel isoflavone-enriched soy protein product and a method used for its manufacture. The finished soy protein product displays desirable flavor and functional properties, and its isoflavone content is substantially increased compared to traditional soy protein concentrates and isolates. In addition the total sulfur containing amino acid content is improved compared to soy protein isolates. The method for the manufacture of the novel soy protein product results in improved yield and reduced waste products compared to those used to manufacture soy protein concentrates and isolates. The novel soy protein product displays desirable flavor, composition, and performance as an ingredient in the production of dairy or meat based food products such as infant formula, nutritional beverage, milk replacer, soy extended bologna, imitation processed cheese spread, water-injected ham, yogurt and frozen dessert.

ABFR Nouveau produit proteique a base de soja enrichi en isoflavone et son procede de fabrication. Le produit proteique a base de soja presente des proprietes de saveur et des fonctionnalites

interessantes, et sa teneur en isoflavone est sensiblement accrue par rapport aux concentrés et isolats de protéine de soja traditionnels. En outre, la teneur totale en acides aminés soufrés est améliorée par rapport aux isolats de protéine de soja. Le procédé de fabrication du nouveau produit protéique à base de soja donne un rendement accru et réduit la production de déchets par rapport aux produits utilisés pour fabriquer des concentrés et isolats de protéines de soja. Le nouveau produit protéique à base de soja est intéressant du point de vue de sa saveur, de sa composition et de son comportement comme ingrédient dans la production de produits alimentaires à base de lait ou de viande tels que lait maternisé, boissons nutritives, substituts de lait, mortadelle au soja, simili-fromage fondu à tartiner, jambon avec adjonction d'eau, yaourts et desserts glacés.

L6 ANSWER 4 OF 5 PCTFULL COPYRIGHT 2003 Univentio  
 ABEN There is provided soybean protein products of significantly lower stachyose content as a function of an improved soybean having a seed stachyose content of less than 45  $\mu\text{mol/g}$  (as is). Improved soybean lines are provided as are methods of using such reduced stachyose soybeans.  
 ABFR On décrit des produits protéiques dérivés du soja et dont la teneur en stachyose est significativement abaissée. Ils proviennent d'un soja amélioré dont la teneur en stachyose des semences est inférieure à 45  $\mu\text{mol/g}$  (en l'état). On décrit des lignées de soja amélioré ainsi que des procédés d'utilisation concernant ces sojas à faible teneur en stachyose.

L6 ANSWER 5 OF 5 USPATFULL  
 AB There is provided soybean protein products of significantly lower stachyose content as a function of an improved soybean having a seed stachyose content of less than 50  $\mu\text{mol/g}$ . Improved soybean lines are provided as are methods of using such reduced stachyose soybeans.

=> d his

(FILE 'HOME' ENTERED AT 13:41:28 ON 07 MAY 2003)

FILE 'CAPLUS, BIOSIS, MEDLINE, AGRICOLA, CAOLD, CASREACT, CROPU, DGENE, DPCI, ENCOMPAT2, EUROPATFULL, FSTA, IFIPAT, INPADOC, JAPIO, NTIS, PAPERCHEM2, PATDD, PATDPA, PATDPAFULL, PATOSDE, PATOSEP, PATOSWO, PCTFULL, PCTGEN, PIRA, RAPRA, SYNTHLINE, TULSA, ...' ENTERED AT 13:41:52 ON 07 MAY 2003

L1 1165 S SOYBEAN (3A) MUTANT  
 L2 4871 S (HERITABLE OR INHERITABLE) (2A) (PHENOTY? OR TRAIT? OR CHARAC  
 L3 19 S L1 AND L2  
 L4 10 S L3 NOT PY>1998  
 L5 1 S L4 AND MYO(W) INOSITOL (W) 1-PHOSPHATE (W) SYNTHASE  
 L6 5 S L4 AND LR33

=>